

REMARKS

(I) Disposition of Claims

- (i) Claims 1, 5, 8, 10-22, 24-25, 27, 29, 31 & 33 are pending in the application.
- (ii) No Claims have been withdrawn from consideration.
- (iii) Claims 2-4, 6-7, 9, 23, 26, 28, 30 & 32 have been canceled from the application.
- (iv) Claims 1, 5, 8, 10, 12-15, 20-22 and 24 stand rejected under 35 U.S.C. § 102.
- (v) Claims 1, 5, 10, 11, 14-19, 19-22, 24-25, 27, 29, 31 and 33 stand rejected under 35 U.S.C. § 103.

(II) Applicants' Actions

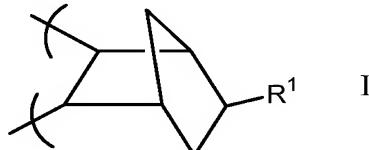
No Claims are amended. Further and favorable reconsideration is respectfully requested in view of the following remarks.

(III) The Invention

In embodiments, the invention is, *inter alia*, a composition comprising: a polymer with a glass transition temperature greater than 310°C and a water absorption of 2% or less;

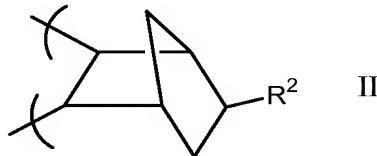
(optionally) one or more metals or metal compounds; and
an organic solvent;

wherein said polymer is a polynorbornene comprising molecular units of formula I



wherein R¹ is independently selected from hydrogen and a (C₁-C₁₀) alkyl.

The invention may further comprise molecular units of formula II



wherein R² is a pendant group capable of participating in a cross-linking or network-forming reaction selected from the group consisting of: epoxides, alcohols, silyl ethers, carboxylic acids, esters, and anhydrides; and the molar ratio of molecular units of formula II to formula I is greater than 0 to about 0.4.

In further embodiments, the invention is, *inter alia*, A method of making a PTF resistor comprising:

combining a polymer with a glass transition temperature greater than 310°C and a water absorption of less than 2%, one or metals or metal compounds, and an organic solvent to provide a PTF resistor composition;

applying the PTF resistor composition to a substrate; and

curing the applied PTF resistor composition; and

wherein the polymer is a polynorbornene comprising molecular units of formula I.

Embodiments are also claimed for electronic devices made in accordance with the methods and materials set forth above.

Formula I is common to all the claims.

(IV) Claim Rejections – 35 USC § 102(e)

Claims 1, 8, 10, 12-13 and 22 stand rejected under 35 USC §102(e) as being anticipated by U.S. Patent Appl. Pub. No. 2004/0084774 Li et al. (hereinafter “Li”). This rejection is respectfully traversed.

The arguments presented in Amendment A and Amendment B, filed on February 20, 2007 and November 5, 2007, respectively, are incorporated herein by reference for the sake of brevity.

Anticipation (from M.P.E.P. §2131)

"A claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051,

1053 (Fed. Cir. 1987). "When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer clock to an offset time to address the Year 2000 [Y2K] problem, applicable to records with year date data in "at least one of two-digit, three-digit, or four-digit" representations, was held anticipated by a system that offsets year dates in only two-digit formats). See also MPEP § 2131.02. "***The identical invention must be shown in as complete detail as is contained in the ... claim.***" *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

The Examiner has failed to meet the required criteria set forth in the M.P.E.P. for anticipation both under the *Verdegaal Bros* test and the *Richardson* test. Applicants' have set forth in excruciating detail the differences between the claimed polynorbornenes and Li on pages 2-4 of Amendment B.

Li does not show the claimed polymer, therefore Li can not anticipate the claimed invention. The Examiner argues that no "probative evidence" has been provided. Applicants request that the Examiner explain what more probative evidence could be provided than technically correct diagrams which show the differences between the invention and Li.

In the August 22, 2006 Office Action the Examiner admits Li does not show the claimed water absorption and conjures up reasoning to support a conclusory statement about why this feature is met by Li which is not technically sound. Please see M.P.E.P. section 2144.02 below

2144.02 Reliance on Scientific Theory [R-6]

The rationale to support a rejection under 35 U.S.C. 103 may rely on logic and sound scientific principle. *In re Soli*, 317 F.2d 941, 137 USPQ 797 (CCPA 1963). However, when an examiner relies on a scientific theory, evidentiary support for the existence and meaning of that theory must be provided. *In re Grose*, 592 F.2d 1161, 201 USPQ 57 (CCPA 1979)

As shown in the M.P.E.P., reliance upon scientific theory falls under section 103, and is not appropriate under section 102. Furthermore, there is no evidence provided by the Examiner to discount the possibility that the polymer of Li was previously dried and that the weight loss is due to residual monomer being liberated upon heating.

Li does not disclose each and every element of the claims, Li does not anticipate the claimed invention, and the rejection under §102 should be withdrawn.

(V) Claim Rejections – 35 USC § 102(b)

Claims 1, 5, 8, 10, and 22 stand rejected under 35 USC §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 10-251343 (hereinafter “JP ‘343”). This rejection is respectfully traversed.

The arguments presented in Amendment A and Amendment B, filed on February 20, 2007 and November 5, 2007, respectively, are incorporated herein by reference for the sake of brevity.

Anticipation (from M.P.E.P. §2131)

"A claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer clock to an offset time to address the Year 2000 (Y2K) problem, applicable to records with year date data in "at least one of two-digit, three-digit, or four-digit" representations, was held anticipated by a system that offsets year dates in only two-digit formats). See also MPEP § 2131.02. "***The identical invention must be shown in as complete detail as is contained in the ... claim.***" *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the

claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

The Examiner has failed to meet the required criteria set forth in the M.P.E.P. for anticipation both under the *Verdegaal Bros* test and the *Richardson* test. Applicants' have set forth in excruciating detail the differences between the claimed polynorbornenes and JP '343 on pages 5-6 of Amendment B.

JP '343 repeat unit A is always present in the composition of JP '343 and it has two fused bi-cyclic structures.

In contrast, the claimed invention contains only a single cyclic structure.

The Examiner argues that "the claims do not exclude" the JP '343 structure. This is ***not the test for anticipation***, as is expressly set forth in the *Richardson* test above. The reference must show the claimed polynorbornenes ***in as complete detail as is contained in the ... claim.***

JP '343 does not show the claimed polymer, therefore JP '343 can not anticipate the claimed invention. Applicants have provided technically correct diagrams which show the differences between the polymer of the claimed invention and JP '343.

In the August 22, 2006 Office Action the Examiner admits JP '343 does not show the claimed water absorption and conjures up reasoning to support conclusory statement that JP '343 meets the claimed feature which is not technically sound and legally incorrect (i.e., the attempt to shift the burden of proof by stating "absent evidence to the contrary). Please see M.P.E.P. section 2144.02 below

2144.02 Reliance on Scientific Theory [R-6]

The rationale to support a rejection under 35 U.S.C. 103 may rely on logic and sound scientific principle. *In re Soli*, 317 F.2d 941, 137 USPQ 797 (CCPA 1963). However, when an examiner relies on a scientific theory, evidentiary support for the existence and meaning of that theory must be provided. *In re Grose*, 592 F.2d 1161, 201 USPQ 57 (CCPA 1979)

As shown in the M.P.E.P., reliance upon scientific theory falls under section 103, and is not appropriate under section 102. The burden stated under section 103 has not been met by the conclusory, unsupported statements made by the Examiner.

As stated above, evidentiary support for the theory must be provided by the Examiner.

Furthermore, the Examiner makes an argument that (a) the claimed water absorption is inherent and (a) attempts to shift the burden to Applicants which is both incorrect and improper. Please see the excerpt from M.P.E.P. §2112 below (emphasis added).

Examiner Must Provide Rationale or Evidence Tending to Show Inherency

The fact that a certain result or characteristic **may** occur or be present in the prior art is **not sufficient** to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is **necessarily present** in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain **thing may result** from a given set of circumstances **is not sufficient.**" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted)

Here, the Examiner has failed to meet the burden set forth in M.P.E.P. §2112, and in particular a showing that the claimed water absorption is **necessarily present in every composition** disclosed by JP '343.

JP '343 does not disclose each and every element of the claims, JP '343 does not anticipate the claimed invention or render it obvious, as no motivation to modify the specific (and different) polynorbornene polymer of JP '343 has been provided, and the rejection under §102, or alternately under §103 should be withdrawn.

(VI) Claim Rejections – 35 USC § 102(b)

Claims 1, 5, 10, 14-15, 20-22 and 24 stand rejected under 35 USC §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over

U.S. Patent No. 6,492,443 to Kodemura et al (hereinafter "Kodemura"). This rejection is respectfully traversed.

The arguments presented in Amendment A and Amendment B, filed on February 20, 2007 and November 5, 2007, respectively, are incorporated herein by reference for the sake of brevity.

Anticipation (from M.P.E.P. §2131)

"A claim is anticipated only if ***each and every element*** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer clock to an offset time to address the Year 2000 (Y2K) problem, applicable to records with year date data in "at least one of two-digit, three-digit, or four-digit" representations, was held anticipated by a system that offsets year dates in only two-digit formats). See also MPEP § 2131.02. "***The identical invention must be shown in as complete detail as is contained in the ... claim.***" *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

The Examiner has failed to meet the required criteria set forth in the M.P.E.P. for anticipation both under the *Verdegaal Bros* test and the *Richardson* test. Applicants' have set forth in excruciating detail the differences between the claimed polynorbornenes and Kodemura on pages 6-8 of Amendment B.

Kodemura uses a ring opening polymerization and subsequent hydrogenation to make an entirely different polymer than claimed polynorbornenes.

The Examiner argues that Kodemura discloses a "polynorbornene which appears to be that of the instant claims. It is therefore expected to have the same properties. Applicant has provided no evidence to the contrary."

This is ***not the test for anticipation***, as is expressly set forth in the *Richardson* test above. The reference must show the claimed polynorbornenes ***in as complete detail as is contained in the ... claim.***

Kodemura does not show the claimed polymer, therefore Kodemura can not anticipate the claimed invention. Applicants have provided technically correct diagrams (i.e., evidence) which show the differences between the polymer of the claimed invention and Kodemura.

In the August 22, 2006 Office Action the Examiner admits Kodemura does not show the claimed water absorption and conjures up reasoning to support a conclusory statement that Kodemura meets the claimed feature which is not technically sound and legally incorrect (i.e., the attempt to shift the burden of proof by stating “absent evidence to the contrary). Please see M.P.E.P. section 2144.02 below. “The massive amount of hydrocarbon will clearly repel water significantly” is a statement, unsupported by any evidence, that does not even purport to meet the claimed feature of water absorption being less than 2%. What does “repel water significantly” mean in the context of less than 2% absorption ?

2144.02 Reliance on Scientific Theory [R-6]

The rationale to support a rejection under 35 U.S.C. 103 may rely on logic and sound scientific principle. *In re Soli*, 317 F.2d 941, 137 USPQ 797 (CCPA 1963). However, when an examiner relies on a scientific theory, evidentiary support for the existence and meaning of that theory must be provided. *In re Grose*, 592 F.2d 1161, 201 USPQ 57 (CCPA 1979)

As shown in the M.P.E.P., reliance upon scientific theory falls under section 103, and is not appropriate under section 102. The burden stated under section 103 has not been met by the conclusory, unsupported statements made by the Examiner. As stated above, evidentiary support for the theory must be provided by the Examiner.

Furthermore, the Examiner makes an argument in the August 2, 2006 Office Action (relied upon by reference by the Examiner) that (a) the claimed water absorption is inherent and (a) attempts to shift the burden to Applicants which is both incorrect and improper. Please see the excerpt from M.P.E.P. §2112 below (emphasis added).

Examiner Must Provide Rationale or Evidence Tending to Show Inherency

The fact that a certain result or characteristic **may** occur or be present in the prior art is **not sufficient** to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is **necessarily present** in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain **thing may result** from a given set of circumstances **is not sufficient.**" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted)

Here, the Examiner has failed to meet the burden set forth in M.P.E.P. §2112, and in particular a showing that the claimed water absorption is **necessarily present in every composition** disclosed by Kodemura.

Kodemura does not disclose each and every element of the claims, Kodemura does not anticipate the claimed invention or render it obvious, as no motivation to modify the specific (and different) polynorbornene polymer of Kodemura has been provided, and the rejection under §102, or alternately under §103 should be withdrawn.

(VII) Claim Rejections – 35 USC § 103

Claims 16, 19 and 33 stand rejected under 35 USC §103(a) as being obvious over U.S. Patent No. 6,492,443 to Kodemura et al (hereinafter "Kodemura"). This rejection is respectfully traversed.

The deficiencies of Kodemura have been well established, as the underlying claim 1 is not unpatentable over Kodemura. Furthermore, Claim 33 requires the claimed polynorbornene of the previously argued claims and the aforementioned arguments are incorporated herein by reference.

The Examiner has provided no motivation why one of ordinary skill in the art would modify Kodemura to obtain the claimed polynorbornene.

(VIII) Claim Rejections – 35 USC § 103

Claims 16-19, 25, 27, 29, 31 and 33 stand rejected under 35 USC §103(a) as being obvious over U.S. Patent No. 6,492,443 to Kodemura et al in view of U.S. Patent No. 5,470,643 to Dorfman (“hereinafter Dorfman”). This rejection is respectfully traversed.

Dorfman does not remedy the deficiencies of Kodemura.

(IX) Claim Rejections – 35 USC § 103

Claims 16-18, 25, 27, 29, 31 and 33 stand rejected under 35 USC §103(a) as being obvious over JP ‘343 in view of Dorfman. This rejection is respectfully traversed.

The deficiencies of JP ‘343 have been well established, as the underlying claim 1 is not unpatentable over JP ‘343. Furthermore, Claim 33 requires the claimed polynorbornene of the previously argued claims and the aforementioned arguments are incorporated herein by reference.

The Examiner has provided no motivation why one of ordinary skill in the art would modify JP ‘343 to obtain the claimed polynorbornene.

Dorfman does not remedy the deficiencies of JP ‘343.

(X) Claim Rejections – 35 USC § 103

Claim 11 stands rejected under 35 USC §103(a) as being obvious over JP ‘343 in view of JP 04214778. This rejection is respectfully traversed.

JP 04214778 does not remedy the deficiencies of JP ‘343.

In view of the foregoing, allowance of the above-referenced application is respectfully requested. Applicants invite the Examiner to contact the undersigned in case of questions. Please charge any unaccounted fee that may be due, to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,

/Brian C. Jones/

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Dated: April 3, 2009